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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/045,354	11/07/2001	Angela Hui	AF01159	1692
29393	7590	06/22/2004	EXAMINER	
ESCHWEILER & ASSOCIATES, LLC NATIONAL CITY BANK BUILDING 629 EUCLID AVE., SUITE 1210 CLEVELAND, OH 44114			NGUYEN, KHIEM D	
			ART UNIT	PAPER NUMBER
			2823	

DATE MAILED: 06/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Advisory Action**

Application No.

10/045,354

Applicant(s)

HUI ET AL.

Examiner

Khiem D Nguyen

Art Unit

2823

--Th MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 04 June 2004 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

**PERIOD FOR REPLY [check either a) or b)]**

- a) ☒ The period for reply expires 4 months from the mailing date of the final rejection.
- b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection. ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☐ A Notice of Appeal was filed on \_\_\_\_\_. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.
2. ☐ The proposed amendment(s) will not be entered because:
- (a) ☐ they raise new issues that would require further consideration and/or search (see NOTE below);
  - (b) ☐ they raise the issue of new matter (see Note below);
  - (c) ☐ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
  - (d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.


NOTE: \_\_\_\_\_

3. ☐ Applicant's reply has overcome the following rejection(s): \_\_\_\_\_.
4. ☐ Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
5. ☒ The a) ☐ affidavit, b) ☐ exhibit, or c) ☒ request for reconsideration has been considered but does NOT place the application in condition for allowance because: See Continuation Sheet.
6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.
7. ☒ For purposes of Appeal, the proposed amendment(s) a) ☐ will not be entered or b) ☒ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: none.Claim(s) objected to: none.Claim(s) rejected: 1-24 and 27.Claim(s) withdrawn from consideration: none.

8. ☐ The proposed drawing correction filed on \_\_\_\_\_ is a) ☐ approved or b) ☐ disapproved by the Examiner.
9. ☐ Note the attached Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_.
10. ☐ Other: \_\_\_\_\_

  
W. DAVID COLEMAN  
PRIMARY EXAMINER

Continuation of 5. does NOT place the application in condition for allowance because: Applicants contend that the reference Cheng et al., U.S. Patent 6,159,821 herein known as Cheng fails to teach or suggest coating the substrate with a sacrificial material that fills the gaps, and also fail to teach or suggest plasma etching to strip the sacrificial material and the hard mask substantially completely in a single plasma etch process. In response to Applicants contention that Cheng fails to teach or suggest coating the substrate with a sacrificial material that fills the gaps, and also fail to teach or suggest plasma etching to strip the sacrificial material and the hard mask substantially completely in a single plasma etch process, examiner respectfully disagree. Applicants are directed to col. 2, line 33 to col. 3, line 51 and FIGS. 1-11 wherein Cheng discloses coating the substrate 10 with a layer of oxide material 17 that fills the gaps 16, and plasma etching using a fluorine chemistry ( $\text{CHF}_3/\text{O}_2$  or  $\text{CH}_3\text{F}/\text{O}_2$ ) (col. 2, lines 54-64) to strip the sacrificial material and the hard mask 14 substantially completely in a single plasma etch process. Since the Applicants does not specify what is the suitable sacrificial materials being used to fill the gaps in the independent claims, examiner concluded that layer 17 of Cheng is a sacrificial material. Furthermore, as illustrated in FIG. 5 by the Applicants, the plasma etching process does not completely strip the sacrificial material in a single plasma etch process. The remaining sacrificial material 211 is left in the gaps 209 and later can be stripped with a solvent as illustrated in FIG. 6. Similarly, as illustrated by Cheng in FIGS. 4-5, the plasma etching process strip the sacrificial material 17 and the hard mask 14 substantially completely in a single plasma etch process. It is clearly shows that a large portion of the sacrificial material 17 and a comprehensive portion of the hard mask is stripped away, what left is a remaining sacrificial material portion 17 as illustrated in FIG. 5. As the Applicants does not clearly specify whether or not both the top surface portion of the sacrificial material and the remaining sacrificial material are stripped completely in a single plasma etch process in the independent claims, Cheng anticipated the claimed invention. For these reasons, examiner holds the rejection proper.